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Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102

To: The Commission

COMMENTS OF QUALCOMM, INCORPORATED

Pursuant to Section 1.429(f) of the Commission's rules, 47 C.F.R. § 1.429(f), QUALCOMM, Incorporated ("QUALCOMM") hereby submits comments in support of petitions for reconsideration concerning the ALI accuracy requirements for position location solutions. The Commission's current accuracy requirements for network solutions are less stringent than those for handset-based Phase II E-911 solutions. This discrepancy between solutions will serve to necessarily deter carriers from utilizing handset-based and hybrid solutions. Therefore, as discussed herein, current rules fail to meet the Commission's objective "to permit the broadest range of technical solutions to be employed to achieve ALI compliance, including handset-based and hybrid solutions" and to "allow other ALI technologies to be deployed as effective competitors to network-based solutions."[1]

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[1] *See* Revision of the Commission's Rules To Ensure Compatibility with

(continued...)

INTRODUCTION

QUALCOMM has actively participated in the Commission's E9-1-1 proceeding and has put considerable effort into the development of technology for carriers and handset manufacturers to deploy handset-based solutions. In particular, QUALCOMM has been at the forefront of industry efforts to incorporate Global Positioning System ("GPS") technologies into its product lines that provide unprecedented levels of accuracy and availability in all terrain. Last year, QUALCOMM announced the development of the gpsOne Mobile Station Modem ("MSM") chipset and software solutions for CDMA carriers. QUALCOMM's gpsOne solution is an extremely high-performance, low-cost, viable solution for carriers' compliance with the Commission's Phase II E9-1-1 mandate.

QUALCOMM's MSM3300 solution, which supports gpsOne, was announced in February 2000. The MSM-3300 is pin compatible with the MSM-3100, thus expediting the development of MSM-3300-based, position enabled handsets. To the extent that CDMA handset vendors are committed to meeting the Commission's deadlines, QUALCOMM believes that the MSM-3300 deployment schedule will support such efforts. Technology trials began in 4Q99 and field trials are currently under way. Early design information release is scheduled for 2Q00, engineering sample general availability for 3Q00, interoperability testing in 4Q00 and, finally, customer trials and initial deployment for handsets in 1Q01. QUALCOMM is

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[1] (...continued)
Enhanced 911 Emergency Calling Systems, *Third Report and Order*, CC Docket No. 94-102, FCC 99-245, at ¶ 19 (Oct. 6, 1999).

working with handset vendors in this regard to facilitate timely gpsOne deployment and is committed to deploying this promising new technology.

As QUALCOMM has invested considerable resources into developing handset-based and hybrid ALI technologies, it is particularly concerned that the Commission's ALI accuracy rules unreasonably impose widely discrepant accuracy requirements on handset-based versus network-based solutions, thereby implicitly favoring providers of network-based solutions. QUALCOMM believes that the disparate requirements between network solutions and handset-based solutions are not in the best interest of overall public safety and are unlikely to result in a timely deployment or present any reasonable hope of broad geographical coverage. This discrepancy also poses a financial disincentive toward handset-based solutions that decrease the likelihood of handset deployment, which we believe is probably the Commission's best hope for a timely and widespread solution deployment. The Commission should therefore modify these requirements.

DISCUSSION

In the *Third Report and Order*, the Commission appropriately concluded that a handset solution for ALI compliance would require a rule change because "a phase-in is a practical necessity for such solutions [and] the flash-cut requirement in our current rules would prevent such solutions from being considered."[2] The Commission therefore determined that phased-in implementation of handset-based solutions would serve the public interest, and "that a policy of technological and

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[2] *Third R&O* at ¶ 28.

competitive neutrality best promotes the public safety and welfare goals of this proceeding, especially in the critical area of ALI."[3] However, in light of the historically low deployment rate of the much *less* complex and costly E9-1-1 Phase I, it is doubtful that current Phase II E9-1-1 requirements will result in significant degree of network coverage in the near future, in part because network solution deployment remains contingent on PSAP requests and in part, as noted by Sprint PCS, due to the development status of and deployment effort associated with network technology.[4] Furthermore, uncertainties in PSAP deployment may delay or prevent effective network solution coverage for a significant number of areas, thereby *undermining* any possibility that network solutions will provide greater coverage in a shorter timeframe such that a reduced performance standard for such solutions is justified. In light of PSAP deployment uncertainties, and the installation and operational complexities associated with a network solution, a handset-based solution is likely to provide the greatest chance of timely deployment of positioning technologies across all geographies and to deliver positioning information to the user and public safety personnel during emergency situations.[5] Indeed, ALI-capable

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[3] *Id.* at ¶ 81.

[4] *See* Sprint PCS at 4, 15.

[5] QUALCOMM expects that where network solutions are utilized, there will likely be large areas, particularly in rural areas, where network solutions are least effective and, due to cost will be very slow to roll out, if ever, Thus, users from network solution-enabled areas will only have the benefits of Phase II technology "part time." This is problematic, as position location coverage is most critical in rural or underpopulated areas where subscribers use their handsets for emergency purposes while commuting or traveling. Thus, a partial or phased-in deployment of network solutions simply does not provide complete or even substantial coverage.

handsets are supposed to be deployed in the marketplace independent of whether PSAPs have requested Phase II and upgraded their own networks.

Sprint PCS underscores the uncertainty the Commission's ALI accuracy rules impose on CMRS carriers considering handset-based or hybrid solutions.[6] This uncertainty is exacerbated further by the Commission's significantly less stringent deployment and accuracy requirements for network-based solutions than for handset-based and hybrid solutions.[7] Aerial Communications notes that "establishing disparate accuracy standards for network-based and handset-based location technology serves no logical purpose" and that to "require different accuracy standards for network-based and handset-based solutions only serves to destroy competitive neutrality."[8] Hence, to ensure technological neutrality and to make ALI availability less dependent on PSAP Phase II deployment, handset-based solutions and network-based solutions must be subject to the same ALI accuracy requirements.

Indeed, from a public interest perspective, the Commission should establish a basic accuracy threshold based upon public safety requirements. This is consistent with the Commission's public interest obligations, as it is the *accuracy and widespread availability* of the location information and the ability to deliver that information to the user and the emergency service provider independent of geography that will

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[6] *See* Nokia-Motorola at 4-5; Sprint PCS at 3-4.

[7] For network-based technologies, the rules require accuracy of 100 meters for 67 percent of calls, 300 meters for 95 percent of calls, and for handset-based technologies, 50 meters for 67 percent of calls, 150 meters for 95 percent of calls. 47 C.F.R. § 20.18(h)(1)-(2).

[8] Aerial Petition at 3-4.

determine the level of safety made available to the public. Simply put, if public safety personnel objectively need 50 meter accuracy for 67 percent of all 911 calls, then that same objective requirement should apply not just to handset solutions, but to network as well. Otherwise, one solution is being favored with no corresponding public interest benefit. If the Commission does not reconsider its decision to codify substantially more lax performance requirements for network-based solutions, it will arbitrarily prejudice carriers against handset-based solutions and potentially hinder the deployment of Phase II availability to the detriment of public safety.

Finally, the Commission's rules require that a carrier using handset solutions "[w]ithin two years [of a PSAP request] or by December 31, 2004, whichever is later, undertake reasonable efforts to achieve 100 percent penetration of location-capable handsets among its subscribers."[9] QUALCOMM cautions that a 100 percent penetration benchmark is infeasible, as there will invariably be some customers who for reasons of price, inconvenience, or other factors will steadfastly refuse to upgrade their handsets. Subjecting carriers to potential liability for failure to achieve 100 percent penetration, particularly will further deter carriers from considering handset-based solutions. In fact, some established cellular carriers have indicated that this requirement of wholesale handset changeout has had this very effect. This requirement should be amended to a lower percentage and a later date -- 2005 or thereafter -- to be more consistent with the record in this proceeding and with commercial realities.

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[9] 47 C.F.R. § 20.18(g)(2)(ii).

CONCLUSION

For the foregoing reasons, QUALCOMM supports modification of the ALI requirements to facilitate the viability of handset-based and hybrid ALI solutions. Such changes are necessary for the Commission to meet the *Third Report and Order* objective of technology neutrality and will serve the general public interest by promoting timely, reliable and widely-available Phase II services.

Respectfully submitted,

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